

## Abstract

The present invention provides a video camera plugged into kiln to monitor and an image processing system using the camera. The video camera is composed of a camera body, a video recorder, a monitor, and a digital thermometer; the image processing system is composed of the camera body mentioned above, a computer and a color monitor. Especially, the present invention is used to monitor material surface during the smelting in a blast furnace; process the image by a computer, describing quantificationally the airflow and temperature distribution of the material surface; monitor the operation state of charging chute or bell, the material stream, and the abnormality in the furnace such as pipeline and material collapse. The advantages of the present invention: Micro camera used to obtain IR image in the furnace, pint-sized, low cost, easy installation, simple maintenance, long service life, and the maintenance performed without stopping production.